APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,534	07/20/2001	John M. Baron	10005753-1	1977

22879	7590	05/13/2004

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EXAMINER
COUSO, YON JUNG

ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/909,534	BARON, JOHN M.
	Examiner	Art Unit
	Yon Couso	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
   Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 July 2001</u>.
2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-20</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-20</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>20 July 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All b)☐ Some * c)☐ None of:
       1.☐ Certified copies of the priority documents have been received.
       2.☐ Certified copies of the priority documents have been received in Application No. _____.
       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>2</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated

by Tretter.

As per claim 1, Tretter teaches a method for automatic detection and correction

of image orientation errors comprising the steps of: receiving a digital representation of

an image (150 and 125 in figure 3); identifying at least one vertical or horizontal objects

within said image (angle shown in figure 5); determining an orientation error of at least

one of said identified vertical or horizontal objects (column 8, lines 12-20); rotating said

digital representation of said identified image in a manner to reduce said orientation

error; and displaying a corrected digital image (121 in figure 2).

As per claim 3, Tretter teaches checking a disable feature to ensure said

automatic detection and correction of orientation errors should be performed (column 7,

lines 32-57).

As per claim 4, Tretter teaches disabling said automatic correction of orientation

errors for orientation errors in excess of a predetermined maximum amount (multiple

skew angle at column 7, lines 32-57).

As per claim 6, Tretter teaches that the automatic detection of orientation errors

is performed from identified edges of objects contained within the digital representation

of an image (figure 5 and column 6, lines 5-14).

As per claim 8, Tretter teaches that the both horizontal and vertical objects are used in said automatic detection of orientation errors (horizontal and vertical edges of the document in figure 5).

2.   Claims 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Zimmermann.

As per claim 9, Zimmermann teaches an image orientation correction system comprising: a user-selectable input device (12 and 13 in figure 1 and column 3, lines 39-43); a tilt determining mechanism configured to sense orientation errors of received images(column 3, lines 36-38 and column 4, line 48-51); a processor configured to respond to said user-selectable input device and to send said orientation errors of an image for modifying said image to remove said orientation errors (column 4, lines 53-59); and; a display configured to display a digital image as modified by said processor (11 in figure 1).

As per claim 10, Zimmermann teaches that the user-selectable input allows a user to disable said orientation correction system (12 and 13 in figure 1 and column 3, lines 39-43).

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11, 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Zimmermann in view of Sharp "GP1S36 Tilt Detecting Photointerrupter" (herein

called 'Sharp').

The arguments advanced in paragraph 2 above as to the applicability of the

reference are incorporated herein.

As per claim 11, Zimmermann discloses tilt determining mechanism. However,

Zimmermann does not teach details on a tilt sensor. Sharp teaches a tilt sensor which

can be used in digital camera or camcoder. It would have been obvious to one of

ordinary skills in the art to incorporate tilt sensor taught in Sharp into the Zimmermann's

tilt determining mechanism because Zimmermann already teaches tilt determining and

correcting mechanism more or less manually. Incorporation of tilt sensor into the digital

camera taught in Zimmermann would increase the efficiency and reliability. Given the

obvious benefits, it would have been obvious to one of ordinary skills in the art, at the

time the invention was made, to incorporate a tilt sensor taught in Sharp into the

Zimmermann's tilt determining mechanism.

As per claim 12, Zimmermann teaches the tilt determining mechanism is

implemented via software (column 5, line 20-column 8, line 13).

As per claim 13, Tretter teaches that the software implemented tilt determining

mechanism detects and uses an edge of an object contained within said digital

representation of said image to determine said orientation errors of said digital image

(figure 5 and column 6, lines 5-14).

As per claim 14, Tretter teaches an automatic disable feature which disables said

orientation correction when said orientation error is determined to be greater than a

predetermined maximum error value (multiple skew angle at column 7, lines 32-57).

As per claim 15, Tretter does not set the predetermined maximum error value to

be five degrees. However, as can be seen in the specification page 6, lines 21-22, there

is nothing critical about the angle specified. Merely setting a threshold value to a five

degree does not deemed to be patentably significant.

4.   Claims 2, 5, 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Tretter in view of Zimmermann.

The arguments advanced in paragraphs 1-3 above as to the applicability of the

references are incorporated herein.

As per claims 2 and 16, Tretter teaches a scanner comprising: an image sensor

(125 in figure 3); a display connected to display an image captured by said image

sensor (121 in figure 2); an orientation sensor identifying an orientation of said image

sensor with respect to said image captured by said image sensor (202 in figure 3); and

an image processor responsive to said orientation sensor for performing a rotation

operation on said image captured by said image sensor so as to provide corrected

image data reducing a misalignment of said image (column 8, lines 12-20). Even though

Tretter does not teach details on camera, Tretter discloses processing photographed

images. Zimmermann teaches performing a rotation operation on said image captured

by said image sensor in the digital camera so as to provide corrected image data

reducing a misalignment of said image (column 8, lines 14-20). It would have been

obvious to one of ordinary skill in the art to incorporate old and well-known image

orientation correction technique into image captured by a digital camera because

regardless of whether image is obtained by conventional optical camera or digital

camera, both still require all the orientation distortion, including tilt and rotation.

As per claim 17, Tretter teaches a memory configured to store said corrected

image data (104 in figure 2).

As per claims 5, 18, and 19, even though Tretter and Zimmermann does not

teach details on lossy compression algorithm, compression is divided into two

categories, lossy or lossless. Most of all image compression is performed based on one

of lossy compression algorithm and most of all image data are compressed before

storage or transmission. It would have been obvious to one of ordinary skill in the art to

incorporate compression algorithm into digital image processing technique.

As per claim 20, Tretter teaches that the image captured by said image sensor

is stored in said memory when said identified orientation is greater than a

predetermined maximum value (multiple skew angle at column 7, lines 32-57).

5.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tretter in

view of Sharp "GP1S36 Tilt Detecting Photointerrupter" (herein called 'Sharp').

The arguments advanced in paragraph 1 and 3 above as to the applicability of

the references are incorporated herein.

As per claim 7, Sharp teaches that the automatic detection of orientation errors

includes operating a tilt angle sensor to determine a tilt parameter value (page 1).

6.   The prior art made of record and not relied upon is considered pertinent to
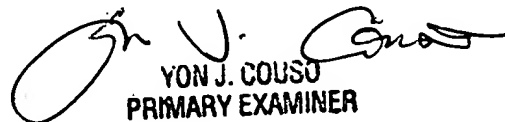
applicant's disclosure.

Ishitani, Parulski et al, Nako, Koh et al, Slatter et al, Martin et al, and McNelley et al are also cited.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (703) 305-4779. The examiner can normally be reached on 8:30 am –5:00 pm from Monday to Friday

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

YON J. COUSO
PRIMARY EXAMINER

Yjc

May 4, 2004